

FILE NOTATIONS

Entered in NID File
 Location Map Pinned
 Card Indexed

Checked by Chief
 Approval Letter
 Disapproval Letter

PJB
IN UNIT

COMPLETION DATA:

Date Well Completed *5-9-69*
 OW..... WW..... TA.....
 GW..... OS..... PA.....

Location Inspected
 Bond released
 State or Fee Land

LOGS FILED

Driller's Log *5-19-69*
 Electric Logs (No.) *3*

E..... I..... Dual I Lat..... GR-N..... Micro.....
 BHC Sonic GR..... Lat..... Mi-L..... Sonic.....
 CBLog..... CCLog..... Others.....

Formation Analysis

4-29-92 fcr

210 XXX

April 11, 1969

Re: Walker Hollow McLish #5
Sec. 7, T7S - R23E
Uintah County, Utah


U.S. Geological Survey
8416 Federal Building
Salt Lake City, Utah 84111

Gentlemen:

Enclosed in triplicate is Application for Permit to Drill the captioned well.

Since I am now the approved Sub-Operator of this portion of the Walker Hollow Unit, no Designation is necessary from Humble.

Yours very truly,


Kenneth D. Luff

KDL:mc

cc: ✓ Utah Oil & Gas Conservation Comm.
1588 West North Temple
Salt Lake City, Utah 84116

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-02651
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR Kenneth D. Luff		7. UNIT AGREEMENT NAME Walker Hollow
3. ADDRESS OF OPERATOR 210 Patterson Building, Denver, Colorado 80202		8. FARM OR LEASE NAME Walker Hollow-McLish
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface <input checked="" type="checkbox"/> 2040 ns1 x 450 wel NE NE SE <input checked="" type="checkbox"/> At proposed prod. zone Same		9. WELL NO. 5
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 25 miles Vernal, Utah		10. FIELD AND POOL, OR WILDCAT Walker Hollow
16. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 520	18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1900'	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 7, T7S-R23E
17. NO. OF ACRES IN LEASE 640	19. PROPOSED DEPTH 5800'	12. COUNTY OR PARISH 13. STATE Uintah Utah
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5380 ungraded ground		17. NO. OF ACRES ASSIGNED TO THIS WELL 80
22. APPROX. DATE WORK WILL START* April 15, 1969		20. ROTARY OR CABLE TOOLS Rotary

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4" ✓	8 5/8" ✓	24# ✓	150 ✓	Circulate (150 sacks) ✓
7 7/8" ✓	5 1/2" ✓	14# ✓	5750 ✓	280 sacks ✓

Drill 12 1/4" hole to a depth of 150' and set 150' of 8 5/8" surface casing.
Drill 7 7/8" hole with mud to a depth of 5800', run IES and Sonic Log and
drill stem test potential oil and/or gas zones. If test, logs and other
data indicate commercial production, run 5 1/2" production casing; if not,
plug and abandon well as per instructions from State Engineer. ✓

50' to far east due to topog - PMB

APPROVED BY DIVISION OF
OIL & GAS CONSERVATIONDATE 4-15-69
BY Clem B Feight

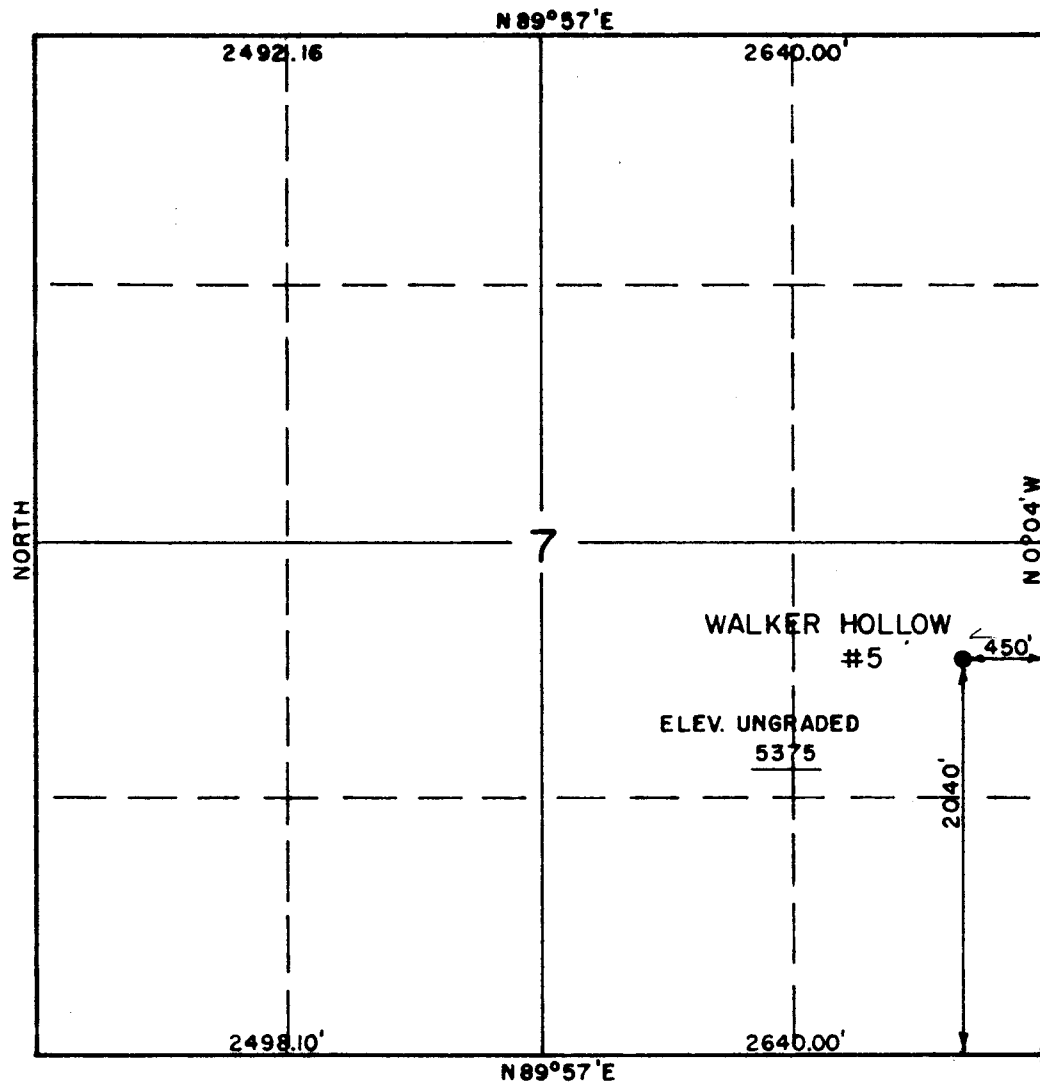
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Kenneth D. Luff TITLE Operator DATE April 11, 1969
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

T 7 S, R 23 E, SLB & M



X = CORNERS LOCATED

PROJECT

K.D. LUFF
WELL LOCATION AS SHOWN IN THE
NE 1/4 SE 1/4, SEC. 7, T 7 S, R 23 E,
SLB & M. UTAH COUNTY, UTAH.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

John J. Marshall
REGISTERED LAND SURVEYOR
REGISTRATION NO 2454
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q - 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 3 SEPT 1968
PARTY GS - RM	REFERENCES GLO PLAT
WEATHER FAIR & COOL	FILE LUFF

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

U-02651

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Walker Hollow

8. FARM OR LEASE NAME

Walker Hollow McLish

9. WELL NO.

#5

10. FIELD AND POOL, OR WILDCAT

Walker Hollow

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 7, T7S, R23E

12. COUNTY OR PARISH

Utah

13. STATE

Utah

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION:

NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

2. NAME OF OPERATOR

Kenneth D. Luff

3. ADDRESS OF OPERATOR

210 Patterson Building, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface

2040 nsl x 450 (ewl) well

At top prod. interval reported below

At total depth

14. PERMIT NO.

43-047-30051

DATE ISSUED

4/15/69

15. DATE SPUNDED

4/19/69

16. DATE T.D. REACHED

5/9/69

17. DATE COMPL. (Ready to prod.)

Dry

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*

5370 g, 5383 K.B.

19. ELEV. CASINGHEAD

--

20. TOTAL DEPTH, MD & TVD

5822

21. PLUG, BACK T.D., MD & TVD

--

22. IF MULTIPLE COMPL., HOW MANY*

--

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

yes

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

Dry Hole

26. TYPE ELECTRIC AND OTHER LOGS RUN

Schlumberger DU8, GR-Sonic, F log

27. WAS WELL CORED

no

28. CASING RECORD (Report all strings set in well)

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	155	12 1/4"	100 sacks	none

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

Copy of geologic report, logs, mud log.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

Kenneth D. Luff

TITLE

Operator

DATE 5/19/69

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	MEAS. DEPTH	TRUE VERT. DEPTH
				Surface	
				3152	
				5040	
				5244	
				5578	
				5730	

See copy of attached geologic report.

Schew.

PMB

KENNETH D. LUFF
#5 McLISH WALKER HOLLOW UNIT
NE SE Section 7, T-7S, R-23E
Uintah County, Utah

WELL SUMMARY

OPERATOR: Kenneth D. Luff

WELL: #5 McLish Walker Hollow Unit

LOCATION: 2040' N of S line and 450' W of E line, Sec. 7, T7S,
R23E SLB & M, Uintah County, Utah

ELEVATION: Ungraded ground = 5375', Graded ground = 5370', KB=
5383'

CONTRACTOR: Barker Well Service

RIG TYPE: Rig #5 Ideco H - 44

COMMENCED: April 19, 1969

TOTAL DEPTH: 5822' Driller, 5814' Logger

LITHOLOGY: Bill Covey

CASING: Surface: Ran 5 joints 8 5/8", 24# surface casing.
Total 155', set at 168' RBM. Cemented with
100 sacks regular cement, 3% CaCl. Plug
down @ 12:30 a.m.

HOLE SIZE: 12 1/4" from surface to 171', 7 7/8" from 171' to 5822'

CORES: None

DRILL STEM TESTS: None

LOGGING SERVICES: Schlumberger Dual Induction-Laterolog from 169' to 5811'
Schlumberger BHC Sonic Log-Gamma Ray from 4300' to 5806'
Schlumberger "F" Log from 4300' to 5806'
Rocky Mountain Geo-Engineering Co., Mud Log from 5000'
to 5822'.

FORMATION TOPS

<u>FORMATION</u>	<u>DEPTH</u>
Uintah	Surface
Green River	3152'
"H" Marker	5040'
"I" Marker	5244'
"J" Marker	5578'
"K" Marker	5730'

CHRONOLOGIC WELL HISTORY

4/18/69 Moving in, rigging up.

4/19/69 Rigging up. Laying water line. Spudded rat hole at 4:00 p.m. Spudded surface hole w/12 $\frac{1}{4}$ " at 5:30 p.m. Drilled ahead w/water to 171'. Circulate $\frac{1}{4}$ hour, ran survey. Trip out. Ran 5 joints (155') of 8 5/8", 24# new surface casing. Set at 168' RBM. Cemented w/100 sacks regular cement, 3% CaCl. Plug down at 12:30 a.m. Good returns. Deviation=1 $^{\circ}$ at 160'.

Total footage=171'

4/20/69 W.O.C. Nippling up to drill ahead. Spudded mouse hole at 1:00 p.m. Trip in, test BOP w/1000 PSI, o.k. Drilling cement and plug at 4:00 p.m. Drilling new 7 7/8" hole with water at 5:15 p.m. Drilled ahead w/water to 1025'. Repair valve on mud line $\frac{1}{2}$ hour, work on rig motor $\frac{1}{4}$ hour.

Total footage=854'

4/21/69 Drilled ahead w/water to 2725'. Welded on swivel 30 minutes, Survey at 1400' = 1 $\frac{1}{4}$ $^{\circ}$. Trip for New Bit #2 at 1400'. Rig repair and pick up 1 drill collar $\frac{1}{2}$ hour. Rig service $\frac{1}{4}$ hour, weld flow nipple and work on mud line valve 1 hour. Work on rotary table $\frac{1}{2}$ hour. Survey at 2494'=1 3/4 $^{\circ}$. Trip for New Bit #3 at 2494'. Trip back in hole, wash 60' to bottom. Weld nipple on goose neck $\frac{1}{2}$ hour.

Total footage=1700'

4/22/69 Drilled 7 7/8" hole w/water and mud to 3274'. Survey at 3052'=1 $\frac{1}{4}$ $^{\circ}$. Trip for New Bit #4 at 3052'. Wash to bottom $\frac{1}{4}$ hour. Replace air valve $\frac{1}{4}$ hour. Mudded up at 2950!..

Total footage=549'

4/23/69 Drilled 7 7/8" w/mud to 3617'. Rig service $\frac{1}{4}$ hour. Work on pump $\frac{1}{2}$ hour.

Total footage=343'

4/24/69 Drilled 7 7/8" hole w/mud to 3861'. Lost approximately 50 bbls mud at 3700'. Lost 6" mud at 10:00 p.m. (approx 3824').

Total footage=244'

4/25/69 Drilled 7 7/8" hole w/mud to 4059'. Survey at 3887'=1⁰. Trip for New Bit #5 at 3887'. Washed 30' to bottom.
Total footage=198'

4/26/69 Drilled 7 7/8" hole w/mud to 4323'.
Total footage=264'

4/27/69 Drilled 7 7/8" hole w/mud to 4527'.
Total footage=204'

4/28/69 Drilled 7 7/8" hole w/mud to 4696'. Survey at 4590'=2⁰. Trip for New Bit #6 at 4590'. Lost returns on trip in hole. Washed to bottom 1/4 hour.

4/29/69 Drilled 7 7/8" hole w/mud to 4786'. Trip for New Bit #7 at 4762'. Tite hole on trip out. Tite hole on trip in, washed to bottom 1/4 hour. Change wash pipe and packing 1 hour.
Total footage=90'

4/30/69 Drilled 7 7/8" hole w/mud to 4938'. Survey at 4836'=2⁰. Picked up 4 drill collars. Start trip out of hole for New Bit #9.
Total footage=152'

5/1/69 Drilled 7 7/8" hole w/mud to 5030'. Finished trip for New Bit #9. Reamed 1/4 hour. Trip for New Bit #10 at 5005'.
Total footage=92'

5/2/69 Drilled 7 7/8" hole w/mud to 5166'. Trip for New Bit #11 at 5134'. Changed saver sub 1/4 hour.
Total footage=136'.

5/3/69 Drilled 7 7/8" hole w/mud to 5283'. Survey at 5212'=1 1/4⁰. Washed to bottom 1/4 hour after trip for New Bit #12 at 5212'. Start trip out of hole for New Bit #13 at 7283'.
Total footage=117'

5/4/69 Drilled 7 7/8" hole w/mud to 5397'. Finished trip in hole w/New Bit #13 at 5283'. Washed to bottom 1/4 hour. Rig service and go through pump 1/4 hour. Trip for New Bit #14 at 5364'. Cut drilling line. Run in more Drill Collars.
Total footage=114'

5/5/69 Drilled 7 7/8" hole w/mud to 5490'. Work on swivel. Survey at 5420'=1⁰. Trip for New Bit #15 at 5420'. Run D.C.'s and pack swivel 1 1/4 hour. Trip for New Bit #16 at 5490'.
Total footage=93'

5/6/69 Drilled 7 7/8" hole w/mud to 5618'. Washed to bottom 3/4 hour after trip for New Bit #16. Worked on pump 1/2 hour. Trip for New Bit #17 at 5582'.

Total footage=128'

5/7/69 Drilled 7 7/8" hole w/mud to 5720'. Strapped out of hole for New Bit #18 at 5642'. No change in depth. Washed to bottom 1/4 hour. Start trip out of hole for New Bit #19 at 5720'.

Total footage=102'

5/8/69 Drilled 7 7/8" hole w/mud to 5822', driller's T.D. Finished trip in hole w/New Bit #19 at 5720'. Trip for New Bit #20 at 5787'. Washed to bottom 1/2 hour. Circulate and condition hole, prep to log.

Total footage=102'

5/9/69 Circulate for logs. Short tripped hole 15 stands. Ran Schlumberger Dual Induction - Laterolog from 169' to 5811'. Ran Schlumberger BHC Sonic Log - Gamma Ray from 4300' to 5806'. Ran "F" log from 4300' tp 5806'. Decided to plug well. Set cement plugs as follows:

5512' to 5712'	35 sacks
3150' to 3250'	25 sacks
100' to 200'	25 sacks

Set 4" by 4' dry hole marker in surface pipe with 10 sacks.

DEVIATION SURVEYS

<u>Depth</u>	<u>Deviation</u>
160	1°
1400	1 1/4°
2494	1 3/4°
3052	1 1/4°
3887	1°
4590	2°
4836	2°
5212	1 1/4°
5420	1°
5582	1°

MIDNIGHT DRILLING DEPTHS

4/19/69	171	171
4/20/69	1025	854
4/21/69	2725	700
4/22/69	3274	549
4/23/69	3617	343
4/24/69	3861	244
4/25/69	4059	198
4/26/69	4323	264
4/27/69	4527	204
4/28/69	4696	169
4/29/69	4786	90
4/30/69	4938	152
5/1/69	5030	92
5/2/69	5166	136
5/3/69	5283	117
5/4/69	5397	114
5/5/69	5490	93
5/6/69	5618	128
5/7/69	5720	102
5/8/69	5822	102

SUMMARY OF OIL AND GAS SHOWS

- 5024-47 4/15 units all C₁ Gray-brown very fine-grained well-sorted medium-well-cemented calcareous sandstone with yellow-gold fluorescence and moderate slow streaming cut. Very heavy stain in few pieces of sandstone. Probably wet.
- 5040-44 6/30 units all C₁ sandstone as above very fine-grained good stain in 2% of sample-very tite, poor porosity. Tite.
- 5103-10 4/90 units Trace of C₂ and C₃ . Gray-brown very fine to medium-grained well-cemented, some poor cement, medium friable calcareous ostra well to poorly sorted sub-angular. Dull yellow-gold fluorescence with good streaming cut. Heavy brown oil stain. Poor to fair porosity. 40% of sample stained. Possibly would yield oil, but is more likely to be wet.
- 5112-18 8/28 units all C₁. Sand as above with increase in spotty stain. Less stain than above. Interpreted wet.
- 5352-86 4/12 units all C₁. Gray-clear fine-grained clean sandstone with dead oil residue in part of sand with better porosity. Sand appears to be water flushed with some fair porosity but no fluorescence. Interpreted wet.
- 5453-57 2/22 units C₁ with trace of C₂ and C₃.
- 5462-64 3/8 units C₁ no heavies.
- 5465-67 2/9 units C₁ no heavies, gray-tan very fine-grained calcareous ostra well-sorted sandstone with dull yellow fluorescence and good streaming cut. Dark brown-light tan stain - some with fair porosity. Some spotty stains. Less than 5% of sample with stains and fluorescence. Interpreted wet.
- 5704-15 3/8 all C₁. Clear fine to medium-grained poorly-cemented friable-unconsolidated sub-rounded very clean sandstone with no fluorescence or stain - a few pieces of very coarse-grained angular sand clusters were noted with light spotty stain and dull yellow fluorescence and very good porosity. Appeared water-flushed. Interpreted wet.
- 5745-57 1/26 all C₁. Tan to clear fine to medium-grained friable unconsolidated sub-rounded clean with dull yellow fluorescence, good streaming cut, some with live oil stain, some with spotty

stain. Part of sand with flushed appearance. Interpreted productive. However, net effective sand in only 6' and would not be commercial.

5760-65 1/28 all C₁. A portion of this increase was recycle gas (probably 2-8 units) sandstone as above with spotty stain. Some stain does not fluoresce. Some good porosity. Interpreted wet.

5773-79 2/28 all C₁. Sandstone gray-clear fine-grained medium-cement, some friable, calcareous with light staining. Dull yellow fluorescence and streaming cut as above. Poor to fair porosity. Interpreted tite from "F" log.

LITHOLOGY

- 5000-10 Sandstone, gray-tan, fine-grained, poorly-cemented, calcareous clean, well-sorted.
- 5010-20 Shale, green-gray green-red, sandy-silty, calcareous.
- 5020-40 Shale, as above with streaks of gray, very fine-grained, hard, tite, sandstone - some ostracodal sandstone.
- 5040-70 Sandstone, gray-brown, very fine-grained well-cemented, calcareous, tite with yellow-gold fluorescence and slow streaming cut. Good brown, even stain. Poor porosity.
- 5070-80 Sandstone, as above with less stain and fluorescence. Sand grading to light green, calcareous siltstone. Some water, very friable, clean sandstone. Variable shale stringers.
- 5080-5110 Sandstone, gray-white, very fine-grained, hard, tite, calcareous, well-sorted with variable shale as above.
- 5110-20 Sandstone, white-gray-brown, fine-grained some medium-grained, well-sorted, medium tite, calcareous, some dirty sandstone with yellow-gold fluorescence and good streaming cut. Dark heavy oil stain.
- 5120-30 Sandstone, white, fine-grained friable, clean NSOFC. Scattered stain as in above sandstone. Limestone, gray-buff, sandy, ostracodal.
- 5130-50 Shale, variegated silty with gray siltstones.
- 5150-70 Sandstone, light-medium gray-white, very fine-grained, well-cemented, tite, clean, calcareous with scattered ostracods, occasional ostra limestone streak, some stain from above sandstone.
- 5170-5220 Sandstone, as above with white fine-medium-grained, clean, sub-angular to rounded unconsolidated loose grains.
- 5220-70 Shale, variegated soft to firm gray green-gray, some red. Abundant unconsolidated medium-grained sand grains.
- 5270-90 Sandstone, white-gray, very fine-fine-grained, clean, calcareous, friable, some ostra sandstone, NSOFC.
- 5290-5310 Shale, variegated as above, some ostra.
- 5310-30 Sandstone, as above with medium to coarse-grained sub-angular, and poorly sorted.
- 5330-40 Shale, variegated (predominantly gray) with light gray siltstones.

- 5340-60 Sandstone, white, very fine-grained to medium-grained, well-cemented, calcareous, clean, some pyrite, some ostra.
- 5360-70 Shale, variegated, firm, sandy, predominantly red brown-gray.
- 5370-5450 Shale, as above with thin stringers of sandstone, clear, fine-grained, friable, clean with dead oil residue in part of sandstone.
- 5450-80 Limestone, gray-tan, very ostracodal, coquina.
Sandstone, gray-tan, very fine to fine-grained, calcareous, medium-well sorted, some ostra. Dull gold fluorescence and good streaming cut. Light and dark stain.
- 5480-90 Sandstone, as above with increase in white, fine-grained, friable, clean, calcareous sandstone. Some ostra sandstone.
- 5490-5500 Shale, variegated, sandy-silty with traces of ostras.
- 5500-10 Limestone, buff, amorphous, sandy, very ostracodal.
Shale, variegated as above.
- 5510-20 Limestone, as above with white very fine to fine-grained, clean medium-friable with some dead oil residue in part of friable sandstone.
- 5520-40 Sandstone, gray-clear, very coarse-grained-mico conglomerate with large, angular quartz grains, poorly sorted, calcareous, some pyrite, some limestone inclusions.
- 5540-70 Sandstone, white-clear, very fine to fine-grained, well-cemented, tite, medium-griable, clean, calcareous. Some very friable sandstone with ostra inclusions. NSOFC
- 5570-90 Shale, variegated, predominantly gray gray-green, some reds. Silty-sandy.
- 5590-5600 Shale, as above, some white, soft clays. Gray, very fine to fine-grained, very ostracodal sandstone.
- 5600-10 Sandstone, white-gray, fine-grained, very clean, calcareous, some pyrite some very ostracodal as above. Trace of dead oil residue in a few pieces of above sandstone.
- 5610-20 Shale, variegated, relatively brown, gray, gray-green, some waxy with mica inclusions.
- 5620-30 No sample.
- 5630-40 Sandstone, gray-white, very fine-grained, hard, tite, calcareous, clean. Some dead oil stain.
- 5640-50 Shale, variegated, abundant trip cavings.

- 5650-60 Sandstone, white, fine-grained, friable, well-sorted, clean calcareous, some ostra
- 5660-70 Shale, variegated as above.
- 5670-90 Sandstone, white, fine-grained, friable, clean, calcareous, well-sorted.
- 5690-5710 Shale, gray, sandy, firm.
- 5710-20 Sandstone, clear, fine to medium-grained, unconsolidated, sub-rounded sand grains. Few pieces of very coarse-grained, angular sandstone with a few pieces of medium-yellow fluorescence with light staining and some with very good porosity.
- 5720-40 Shale, variegated, predominantly gray, sandy with some gray siltstone. Some pyrite.
- 5740-60 Sandstone, white, fine to medium-grained, friable, unconsolidated, clean, sub-rounded with trace of yellow-gold fluorescence. Some spotty stain, some even stain.
- 5760-70 Sandstone, as above with increase in fluorescence and live stain. Some very good porosity, some with flushed appearance.
- 5770-80 Sandstone, clear, unconsolidated, fine to medium-grained, sub-rounded, clean, some spotty stain.
- 5780-90 Sandstone, clear, fine to medium-grained. Some coarse-grained, unconsolidated, subrounded, very clean. Sand appears to be water sand. This sample lags back to a shale section therefore, sample does not represent lithology detailed - poor sample.
- 5790-5810 Shale, abundant red shale coming from uphole. (20' of fill up on trip at 5787').
- 5810-20 Shale, as above with white, fine-grained, medium-cemented, clean, calcareous. Some friable. NSOFC

BIT RECORD

<u>Bit No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>In</u>	<u>Out</u>	<u>Footage</u>	<u>Hours</u>
1	7 7/8	Smith	DTJ		1400	1229	11½
2	7 7/8	HTC	OSC3	1400	2494	1094	9½
3	7 7/8	HTC	OSClGJ	2494	3052	588	9¼
4	7 7/8	Smith	SS4	3052	3887	835	63½
5	7 7/8	Smith	SS4	3887	4590	703	70¼
6	7 7/8	Smith	SS4	4590	4762	172	23
7	7 7/8	Smith	C2J	4762	4836	74	9½
8	7 7/8	Smith	V2J	4836	4938	102	10 3/4
9	7 7/8	Smith	V2J	4938	5005	67	9¼
10	7 7/8	Smith	SS4J	5005	5134	129	16¼
11	7 7/8	Smith	V2J	5134	5212	78	11¼
12	7 7/8	Smith	C2	5212	5283	71	10½
13	7 7/8	Smith	T2	5283	5364	93	10 3/4
14	7 7/8	Smith	C2	5364	5420	56	7¼
15	7 7/8	Smith	C2	5420	5490	70	9
16	7 7/8	HTC	OWVJ	5490	5582	92	12¼
17	7 7/8	Reed	4BVGJ	5582	5642	60	10 3/4
18	7 7/8	Smith	V2	5642	5720	78	12½
19	7 7/8	Smith	V2	5720	5787	67	10¼
20	7 7/8	Smith	T2	5787	5822	35	4

DAILY MUD CHARACTERISTICS

<u>Date</u>	<u>Depth</u>	<u>Type</u>	<u>WT</u>	<u>Vis.</u>	<u>Filtrate</u>	<u>Ph</u>	<u>Sd%</u>	<u>Solids%</u>
4/21/69	1758	Water						
4/22/69	3048	Gel-Chem	9.0	36	10	9.0	1/2	
4/23/69	3428	Gel-Chem	9.4	39	8.0	9.0	3/4	
4/24/69	3721	Gel-Chem	9.2	48	10.2	9.0	1/2	
4/26/69	4174	Gel-Chem	9.5	44	7.6	9.0	1/2	
4/27/69	4447	Gel-Chem	9.5	37	8.0	9.0	1/2	
4/28/69	4590	Gel-Chem	9.8	44	10.5	9.5	3/4	
4/29/69	4755	Gel-Chem	9.5	42	11.0	9.5	1/2	10
4/30/69	4839	Gel-Chem	9.3	64	8.0	9.0	1/2	7.5
5/1/69	4974	Gel-Chem	9.4	41	7.8	9.5	1/2	8
5/1/69	4990	Gel-Chem	9.5	42	7.8	9.5	1/2	8 LCM 10%
5/2/69	5126	Gel-Chem	9.5	60	8.0	9.5	1/2	
5/3/69	5214	Gel-Chem	9.7	52	7.0	9.5	1/2	11
5/4/69	5349	Gel-Chem	9.5	42	6.0	9.5	1/2	
5/5/69	5438	Gel-Chem	9.5	55	6.0	9.0	1/2	
5/6/69	5573	Gel-Chem	9.5	41	6.0	9.5	1/2	
5/7/69	5657	Gel-Chem	9.5	47	6.0	9.0	1/2	